



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,872	02/23/2004	Hiroshi Yoshida	248173US-2 CONT	7086
22850	7590	10/04/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			AHN, SAM K	
			ART UNIT	PAPER NUMBER
			2637	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/782,872	Applicant(s) YOSHIDA ET AL.	
	Examiner Sam K. Ahn	Art Unit 2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-11, 13 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-11, 13 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/466,929.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>223</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/466,929, filed on 04/10/00.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 9-11,13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pietzold, III et al. USP 6,091,765 (Pietzold, cited in IDS) in view of Mitola (The Software Radio Architecture, cited in IDS).

Regarding claims 9,10,13 and 15, Pietzold teaches a computer-readable recording medium recording software for receiving and transmitting a radio signal, comprising: receiving and transmitting device (12 in Fig.1 further

illustrated in Fig.5), ADC (129 in Fig.5) and DAC (130 in Fig.5), a digital signal processing device (24) configured to perform a digital signal processing for an output of said ADC and for an input of said DAC, a controller (28) configured to control one of the element by referring to a library (14,16) including a group of software (software depending on each of the plurality of signaling scheme, note col.5, lines 43-47) for implementing a predetermined radio facility and executing predetermined software (retrieved from the memory, 14) on basic software (software that supports the controller, 28, and user, 26), an application program (26 in Fig.2, note col.6, lines 5-6) including a plurality of hardware-independent instructions (for plurality of hardware, 34,36,38,40,42,44 wherein the hardware are configurable, note col.6, lines 23-50) configured to receive and transmit the radio signal independently of hardware, and a software library (14,16) configured to control hardware (by providing instruction retrieved from the memory, note col.5, lines 50-67, col.7, lines 19-22), wherein the application program is configured to enable a radio communication apparatus to receive and transmit the radio signal by referring to the software library (14,16) to selectively convert the plurality of hardware-independent instructions to control the hardware when the radio communication apparatus includes the hardware and the hardware-independent instructions can be implemented on the hardware (note col.5, lines 38-67 wherein the hardware is provided with hardware-independent

Art Unit: 2637

instructions selected by the user, thus providing hardware-independent instructions to the hardware).

Although Pietzold suggests that the system supports different type of signaling schemes (note col.5, lines 42-47), Pietzold does not explicitly teach wherein the hardware and the instructions are for analog hardware and analog hardware-independent instructions.

Mitola teaches programmable system supporting analog and digital signals (see Table 1 wherein analog and digital signals, thus analog and digital hardware are supported in order to produce the analog and digital signals). Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate the teaching of Mitola by supporting analog and digital signals, thus incorporating the analog and digital hardware in the system of Pietzold (34,36,38,40,42,44 in Fig.2) for the purpose of different signaling scheme (which is also suggested by Pietzold, note col.5, lines 43-47) including analog and digital signaling scheme, hence, increase the flexibility of the system. The instructions of Pietzold are selected by the user (26), and the instructions are retrieved from the memory (14) through the download port (16) controlled by the BIOP (28, note col.6, line 51 – col.7, line 8). Thus, by configuring the hardware, desired signaling scheme may be produced.

Art Unit: 2637

Regarding claim 11, Pietzold further teaches the limitation of wherein the selection by said controller (28 through the user) is executed using said software by referring to said library (14,16).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hessel et al. USP 6,343,207 B1 teach programmable radio device selecting and producing different signaling scheme.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Ahn whose telephone number is (571) 272-3044. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sam K. Ahn
10/01/05

TEMESGHEN GHEBRETINSAE
PRIMARY EXAMINER
10/07/05